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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/601,089

06/20/2003

Masaya Adachi

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7590

12/16/2004

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EXAMINER

PHILOGENE, HAISSA

ART UNIT

PAPER NUMBER

2828

DATE MAILED: 12/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/601,089

Applicant(s)

ADACHI, MASAYA

Examiner

Haissa Philogene

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on amendment filed 09/27/04.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-16 is/are allowed.
- 6) ☒ Claim(s) 17-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

Claims 1 and 20 are objected to because of the following informalities: In claim 1, line 9, change "sate" to ~~state~~. In claim 20, line 1, change "claim 17" to ~~claim 18~~.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art, Fig.22, in view of Broer et al., Patent No. 5,928,801. Applicant's admitted prior art, Fig.22, discloses a display device comprising a substrate (400) having a reflective electrode (300), an organic emissive layer(100-102) and an opposite electrode (200) within the inner surface thereof in this order to make up a plurality of pixels placed in a matrix form and having a phase plate (700) being a quarter wave plate and a polarizer plate (600) on the outer surface thereof in this order. Applicant's admitted prior art does not disclose a polarization separator comprising cholesteric liquid crystal layer. However, this feature is well-known in the art as evidenced by Broer which discloses in Fig.2 a display device comprising a polarization separator (11 next a phase plate (15)) comprising cholesteric liquid crystal layer (see

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Col.5, lines 50-62; Col.6, lines 34-49). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to incorporate the polarization separator as taught by Broer into the applicant's admitted prior art type display device, because it would ensure that substantially no light be absorbed and that the light originally having the unwanted state of polarization be recuperated so that the greater part can be converted in light having the desired state of polarization, thereby obtaining a relatively high brightness in the display.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art in view of Broer et al. as applied to claim 18 above, and further in view of Nishikawa et al., Patent No. 6,590,337.

Applicant's admitted prior art in view of Broer discloses the claimed invention substantially as explained above except for an active matrix element for selecting and driving said pixel being provided within the inner surface of said substrate. However, this feature is well-known in the art as evidenced by Nishikawa which discloses in Fig.2 an active matrix type display device comprising a selective drive circuit 2 readable as an active matrix element for selectively driving a pixel 4 provided within an inner substrate 1 in response to an output from a driver circuit 7. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to employ the active matrix element as taught by Nishikawa into the Applicant's admitted prior art in view of Broer type display device, because it would allow application of predetermined voltages to the pixels so as to drive the display region, thereby improving the efficacy of the display device.

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Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Broer et al. in view of applicant's admitted prior art, Fig.22.

Broer discloses in Fig.1 a display device comprising a first substrate (see Claims 6 and 11-14) having a reflective electrode (7), an organic emissive layer (3) and an opposite electrode (5) within the inner surface thereof in this order to make up a plurality of pixels placed in a matrix form, and an inherent second substrate having a polarization separator (11), as it may be a self-supporting film, readable as being within the inner surface thereof opposite the inner surface of said first substrate and having a phase plate (15) readable as being on the outer surface thereof in this order, said polarization separator (11) comprising cholesteric liquid crystal layer (see Col.5, lines 50-62; Col.6, lines 34-49), and said phase plate (15) comprising a quarter wave plate (see Col.8, line 27). Broer does not disclose a polarizer plate. Applicant's admitted prior art discloses a display device comprising a polarizer plate (600) interconnecting a phase plate (700) to form a circular polarizer plate. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to incorporate the polarizer plate as taught by Applicant's admitted prior art into the Broer type display device, because it would allow absorption of any converted linearly polarized light upon incidence of ambient light, thereby improving the efficiency of the display device.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Broer et al. in view of applicant's admitted prior art as applied to claim 17 above, and further in view of Nishikawa et al., Patent No. 6,590,337.

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Broer in view of applicant's admitted prior art discloses the claimed invention substantially as explained above except for an active matrix element for selecting and driving said pixel being provided within the inner surface of said first substrate. However, this feature is well-known in the art as evidenced by Nishikawa which discloses in Fig.2 an active matrix type display device comprising a selective drive circuit 2 readable as an active matrix element for selectively driving a pixel 4 provided within an inner substrate 1 in response to an output from a driver circuit 7. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to employ the active matrix element as taught by Nishikawa into the Broer in view of Applicant's admitted prior art type display device, because it would allow application of predetermined voltages to the pixels so as to drive the display region, thereby improving the efficacy of the display device.

Allowable Subject Matter

Claims 1-16 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art fails to disclose "said polarization separator having a reflectance of the wavelength range from 520 nm to 600 nm smaller than a reflectance of range not more than 510 nm" (claim 1).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Iijima, Patent No. 6,300,989; Iijima et al., Patent No. 6,359,668.

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Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Haissa Philogene whose telephone number is (571) 272-1827. The examiner can normally be reached on 6:30 A.M.-6:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MinSun Harvey can be reached on (571) 272-1835. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

hp

Haissa Philogene
Primary Examiner
A.U. 2828
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